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ABSTRACT

The purpose of this report was to explore one way in which quantitative and qualitative paradigms in program evaluation can be employed to reinforce each other. An evaluation was conducted of a large number of special education programs for preschoolers with handicaps in Louisiana. Since 1978, Louisiana has funded programs in 65 public school systems and 24 specialized day school programs serving over 5,000 children. Early identification and intervention is encouraged, as well as a network to disseminate information to teachers and parents. Programs were provided at a school or center, in the home, or both. The evaluation studied the quality and efficiency of Louisiana's programs funded by the Education of the Handicapped Act, focusing on educational models, success factors, program outcomes, and policy considerations. Four phases were used: (1) prefatory naturalistic study, designed to provide the foundation for a design matrix, one axis of which identified the data to be collected and the second of which identified probable data sources; (2) first wave case studies--questionnaire and interview development; (3) second wave case studies--pretesting of instruments and qualitative data collection; and (4) third wave case studies--use of instruments, interviews, and observations at 55 sites. The Early Childhood Environment Rating Scale was used for the observations. Although analyses of the data were not yet completed, it was concluded that client participation was very valuable and increased evaluation use. A two-page reference list concludes the document. (GDC)

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TRIANGULATION IN THE EVALUATION OF SCHOOL SYSTEM INTERVENTIONS

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Abstract

The qualitative and quantitative research paradigms are inherently contradictory in their philosophical assumptions, their methods, and their purposes (Smith & Heshusius, 1986; Thompson, 1986). However, the methods of both paradigms can be usefully employed in a given evaluation study. When a qualitative study is conducted initially, the external validity of the quantitative study is enhanced. Evaluators can be more confident that the correct questions are being posed. And the process may also facilitate greater use of evaluation results.

Program evaluators have long expressed concern that the evaluation results they generate are not adequately considered by decision makers. Kilbourne and DeGracie (1979, p. 12) offer a dramatic but representative exemplar of this view:

> All LEAs (Local Education Agencies), with possibly a few exceptions, can point to their volumes of research and evaluation verbiage sitting on the shelves of district administrators being used for little else than a door stop, swatting flies, or any of the other various and sundry purposes for which research is used in the public schools.

King, Thompson, and Pechman (1981, pp. 1-4) catalog a series of similar views, though somewhat more positive views are also reported by Thompson (1982, pp. 4-7).

However, it is noteworthy that this disillusionment generalizes more broadly outside education and to basic researchers as well. For example, Manicas and Secord (1986, p. 399) note that

> In the monumental Psychology: A study of a science, edited by Sigmund Koch (Volumes 1-6, 1959-1963), one eminent psychologist after another, after many years -- or even a lifetime of research -- admitted to strong doubts about where they had been and what had been achieved and some suggested that our most basic assumptions about the nature of psychology as a science and a method had to be questioned.

This disillusionment has been one cause (Fetterman, 1982, p. 19) of increased interest in qualitative methods. Thus, several authors (e.g., Lincoln & Guba, 1985; Patton, 1980) have written texts to help researchers employ qualitative methods.

More recently, several authors have suggested that quantitative and qualitative paradigms have begun to realize a rapprochement (e.g., Rist, 1977). Miles and Huberman (1984, p. 20) have even argued that

> If one looks carefully at the research actually conducted in the name of one or another epistemology, it seems that few working researchers are not blending the two perspectives.

The purpose of the present report is to explore one way in which methods from the two paradigms can be employed to reinforce each other. The combination was in the tradition of "Methodological Triangulation" as elaborated by Patton (1980, p. 109), i.e., "The Use of Multiple Methods to Study A Single Problem or Program." The purpose of triangulation often involves "checking out the consistency of findings generated by different data-collection methods" (Patton, 1980, p. 329).

Background of the Evaluation

Historical Review

Though early childhood education is a relatively new field (a number of states have not even developed teacher certification requirements), there are historical roots for early childhood education dating back to the early 1600's. John Locke introduced the "blank tablet" concept of the newborn's mind as opposed to the belief that infants were born with evil ideas, a belief which pervaded the times and was evidenced by the harsh discipline of children. Later in the 1700's Jean Jacques Rousseau, in his book Emile, stressed the importance of educating a child from birth. Both men advocated that children be given empathic understanding and be treated with sympathy and compassion.

The earliest work with a special child is the documented efforts of Jean-Marc Itard. In 1799, a child approximately 12 years of age was found living in the forest near Aveyron, France. It was thought that the boy, named Victor, had been raised by animals, and he was described as "an incurable idiot." Though Itard never achieved the level of success he strove for, he developed unique teaching strategies that his student, Edouard Sequin, utilized to profoundly influence the training of the mentally retarded in the United States. The work of these early theoreticians and practitioners, along with the subsequent work of such notables as Montessori, Gesell, Piaget, and others has provided the framework leading to the development of early education programs for handicapped children.

Impetus for the development of early education programs across the United States was provided by the federal government in 1969 with the passage of the Handicapped Children's Early Education Program. The initial appropriation of $1 million supported 24 projects, but today the First Chance Network, as it is sometimes called, includes at least one project in each state, Puerto Rico, and the trust territories. The basic purpose of the network is to provide a full range of services for all handicapped preschool children by giving support to experimental approaches seeking in several special ways to increase the number of children receiving new or improved services (DeWeerd & Cole, 1976).

Legislative Mandate for Program

The Louisiana State Legislature enacted Act 754 (Education of All Exceptional Children Act) in 1977--a parallel of Federal P.L. 94-142.

Act 754 mandated services to identified handicapped children 3 to 5 years of age, and permitted services to children from birth to 2 years who have serious handicapping conditions, which, if untreated, could become greatly compounded by the time children reach school age. The Louisiana State Department of Education has received State Implementation Grant funding annually since 1978. From the first year of funding, when the program consisted of only six school systems that provided handicapped preschool students with special education services, the program has expanded to provide a formalized preschool program in 65 public school systems plus several residential programs and specialized day programs across the state to more than 5,000 children.

Though preschool programs for the handicapped have been in existence since 1977-78, much remains to be done to realize the full intended effects of both federal and state laws. The primary goal of the State's Preschool Incentive Grant of 1984 was to identify all handicapped children, ages 3 through 5, in Louisiana, but it also established a regional network of eight Louisiana Early Education Program Coordinators, who provide a direct link between the State Department of Education and the local school programs. Through this network teachers, related service personnel, and parents receive training, technical assistance, and support to improve their knowledge and skills in helping preschool handicapped children. The network also serves as the vehicle for dissemination of information to teachers and parents.

Description of Programs

Programs for preschool children generally fall into one of three

settings: 1) center-based with instruction provided at a school or center, 2) home-based with instruction provided in the child's home, and, 3) combination center/home-based with instruction provided at a center for some children and in the home for other children within the same school system. In addition to these settings, some children are served in residential facilities or in special school facilities, some of which are not under the jurisdiction of the parish school program or the state education agency.

Center-based programs are generally housed at a public school or center. Children are transported to and from the center by regular school buses, special education buses, or individual cars. The length of the school day is five and one-half hours. One teacher and one paraprofessional are provided for the initial six children in the class, and additional paraprofessionals are allotted for additional groups of three children. Adaptive physical education, physical and occupational therapy, and speech therapy are offered in many center-based programs.

Home-based programs are provided at the child's home by a teacher on a regularly scheduled basis. A family member is required to be present during the child's instruction. Related and support services are also available if deemed appropriate on the child's individual education plan (IEP). To receive these related or support services the child must generally be taken to a neighborhood school or center.

Combination center/home-based programs use both kinds of settings in providing services to the children within the same school system. Some children who, for a variety of reasons, may not be able to be transported to a center but are eligible for services may receive their instruction in the home.

Eligibility Criteria

According to Louisiana Bulletin 1508, preschool handicapped children in Louisiana may receive services in one of the 65 public school programs if they are between the ages of 3 and 5 years and have been identified and classified as requiring only speech services or as categorically or noncategorically handicapped. Categorically handicapped students are those who have sensory deficits, multihandicapping conditions, or are labeled autistic. Noncategorically handicapped students are high-risk youngsters.

Re-evaluation of children classified as noncategorically handicapped occurs prior to or during the first year of enrollment in school; that is, at 6 years of age. Re-evaluation of categorically handicapped children is conducted every three years. Those classified in a special education category must meet all eligibility requirements for the suspected exceptionality for continued placement in special education.

Initiating the Evaluation

The Secretary of the U.S. Department of Education published final regulations (34 CFR Part 79, published as 48 FR 29158, June 24, 1983) in the Federal Register implementing Executive Order 12372 entitled "Intergovernmental Review of Federal Programs." The purpose of this order is to sponsor studies to assess the impact and effectiveness of programs assisted under the Federal Education of the Handicapped Act. The regulations took effect September 30, 1983, and were disseminated to the states in May of 1984.

The Bureau of Evaluation, Louisiana Department of Education, submitted a proposal following the guidelines outlined in the "Application for Assistance under the State Educational Agency/Federal Evaluation Studies Program," CFDA Number: 84.159. The proposal, titled "Statewide Evaluation of the Early Education Program for Handicapped Children in Louisiana," represents a joint effort by the Bureau of Evaluation in the Louisiana SDE Office of Research and Development and the Louisiana SDE Office for Special Educational Services. Following a competitive review, the proposal was funded, and the U.S. Department of Education entered into a cooperative agreement with the Louisiana Department of Education to conduct the evaluation. The study began on January 1, 1985, and is scheduled for completion on June 30, 1986.

Purpose of Evaluation

"The current early intervention efficacy literature focuses almost exclusively upon child outcome data," according to Carta and Greenwood (1985, p. 89). Substantial gains have been documented for children having a variety of handicapping conditions at all levels of involvement--mild, moderate, and severe. Most studies examine selected populations of children in demonstration projects or model programs. Studies conducted by Hayden and Haring (1976), Bricker and Bricker (1976), and Hanson and Schwartz (1978) (cited in McNulty, Smith, & Soper, 1982) support early intervention for children with Down Syndrome; studies by Simmons-Martin (1981) and Clark (1981) (cited in McNulty, Smith, & Soper, 1982) showed gains by children with hearing impairments; studies by Rosen-Morris and Sitkein (1981) and Bricker and Sheehan (1981) (cited

in McNulty, Smith, & Soper, 1982) demonstrated significant educational gains by severely/ profoundly handicapped children. Several longitudinal studies have focused on the effectiveness of specific, sometimes experimental, instructional programs when used with low income, disadvantaged populations (New York State Department of Education, 1982; Schweinhart & Weikart, 1981; Weiss, 1981). According to Meisels (1985, p. 2), "the most comprehensive analysis of the longitudinal effects of early intervention on children from low-income families consists of a re-analysis of data from 15 early education programs, some of which began as early as 1961," known as the Consortium for Longitudinal Studies (1983). This re-analysis involved data collected on more than 1,000 children.

Conducting a program evaluation requires the collection of appropriate descriptive information about a program from all persons involved in the program--program personnel, service providers, and program recipients. This information can then be used in describing the program and determining its effectiveness and efficiency. The present evaluation is a study of 65 separate school programs consisting of from one class to as many as 44 classes, with the total number of handicapped children in excess of 5,000. The program includes more than 400 teachers, at least the same number of teacher aides, numerous professional ancillary staff, more than 65 program administrators and, oftentimes, teams of pupil appraisal persons. Service providers include the agencies and organizations providing assessment or instructional service to this handicapped preschool population and their parents. In addition to the aforementioned programs, there are 24 State Approved Special Schools, some of which are residential, that are not under the jurisdiction of the local school system, but provide service to these children and their parents.

The evaluation process can itself have important impacts insofar as the process requires the identification and involvement of program providers and recipients at all levels. Questioning of program providers and participants leads to the realization that they are contributing to the study. Recognition of this partnership is conducive to discussion and disclosure of information which is sometimes self-informing and sometimes illuminates issues and concerns not generally highlighted in more typical evaluation procedures.

The purpose of the present evaluation is to provide information about the quality and efficiency of early education programs for handicapped children in Louisiana that are provided assistance under provisions of the Education of the Handicapped Act (20 U.S.C. 1401 et seq.). The evaluation will meet these purposes through the attainment of four objectives: (1) to define and report the models of early childhood handicapped programs as they are implemented in Louisiana and provide a conceptual framework for planning and accountability, (2) to identify and report the factors within these models that are associated with program efficiency and effect, (3) to measure and report the outcomes of early childhood handicapped programs, and (4) to identify and report policy considerations in areas related to early childhood handicapped programs. Audiences for the evaluative information include federal and state legislators and policy makers, state and local program administrators, and program participants.

Use of the findings of the evaluation is also important, and evaluation use is an underlying objective that is encouraged through written reports to the federal grantors, administrative and special education staff of the Louisiana Department of Education, and local

program administrators. The evaluation also includes informal briefing reports to the Louisiana Advisory Council for the Education of Exceptional Children and the Louisiana Board of Elementary and Secondary Education. An Advisory Team for the evaluation includes representatives from the above groups as well as state special educators, local school system special educators, and educational evaluators. Broad-based participation in planning, conduct, and dissemination of the evaluation is intended to increase the use of the information generated by the evaluation.

Method

Structure of Study

The current study consists of four major segments: a prefatory naturalistic study designed to provide the foundation for a design matrix, one axis of which identified the data to be collected and the second of which identified probable data sources; first-wave case studies, designed to facilitate access to data and to check the feasibility and content of questionnaire/interview protocols; expanded second-wave case studies, designed to fieldtest data collection instruments and to continue the qualitative investigatory component; and the final third-wave component, designed to collect quantitative and qualitative data via use of data collection instruments, personal interviews, telephone interviews, group interviews, and observations. The paradigm is summarized in Figure 1.

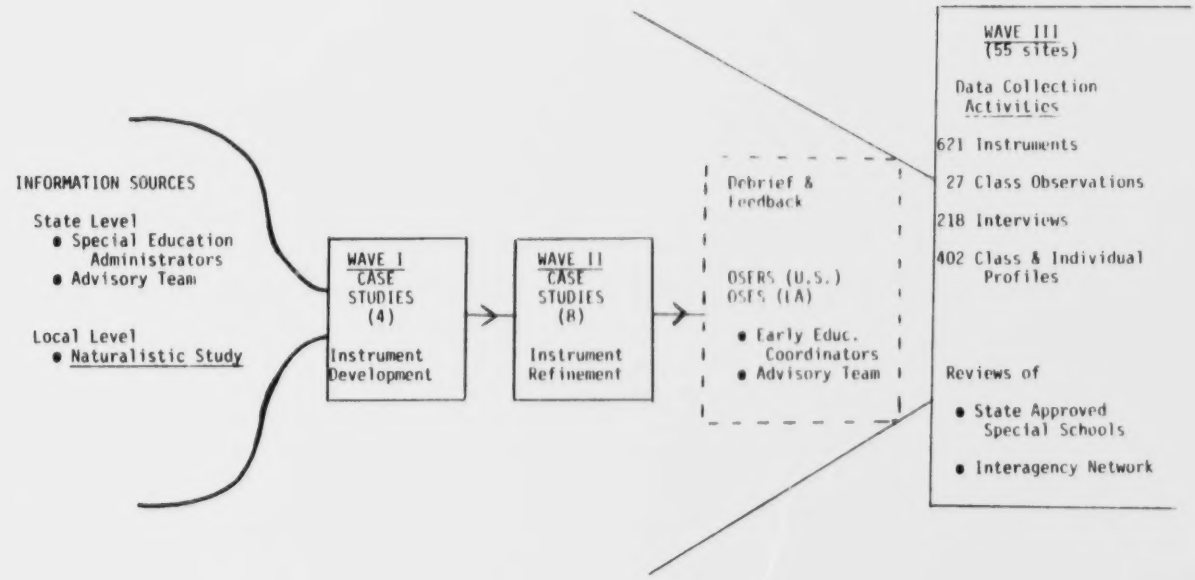

Figure 1: Flow Chart of Evaluation Paradigm

Prefatory Naturalistic Study

The naturalistic component consisted of a series of site visits to preschool handicapped programs within a one-day drive of the evaluation headquarters. Although these sites were selected on the basis of convenience of location rather than on the basis of randomization, sites and formats were selected to encompass all but home-based settings. In addition to the center-based and combination program formats, the evaluators studied the external agencies and institutions that support the preschool handicapped program. These interviews and observation visits gave rise to the interview and questionnaire protocols developed later in the study.

The naturalistic study was designed to permit the evaluators to examine the real world of preschool handicapped educational programs and to compare specific components of the programs to related research

literature. The open-ended exploratory strategies were crucial to issue identification and to the specification of the evaluation design.

Unexpected Outcomes of the Naturalistic Component

During the naturalistic study, the evaluators learned how to gain entry most facilely into the 65 LEA programs and how to best allay the fears of program personnel, who had historically been subjected to compliance monitoring by state department teams. Once these two obstacles were cleared and rapport was established, the program personnel became receptive to the idea of program evaluation, especially one in which their input would be actively used. Knowledge that their role in issue identification was of utmost importance and realization that the evaluators were relying upon program personnel's familiarity with the program rather than their own preconceptions of what a preschool handicapped program should look like appeared to be conducive to getting program personnel to "buy into" the study. The bottom line was the program personnel's perception of the evaluation as having applicability. The potential for utility of the findings was apparent from the repeated requests for feedback and some form of notification of the findings and recommendations of the study. This was true at all levels, from parish-level supervisors who wanted to know how other parishes were cutting the costs of extended-year sessions, to school administrators who wanted to know how other principals were integrating the preschool handicapped children and the "normal" children, to teachers who wanted to know how other teachers were reacting to the implications of maintenance-of-health procedures, to parents who wanted to know why a

vocationally oriented curriculum that stresses average daily living skills could not be put in place for autistic children to prepare them for life in a group home.

First-Wave Case Studies

The first-wave case studies which followed the naturalistic study were used to determine the best logistical procedures for gaining access to the LEA programs, arranging for extended classroom observations, and scheduling personal interviews with program staff and parents. The major thrust of the first-wave case studies was the initial application of the design matrix to the programs in an effort (1) to describe the program structure, the staff, the children, and the relationships between or among various facets of the program, and (2) to identify appropriate outcome measures and the most probable and accurate sources of information. Role identification and designation of information-rich sources were accomplished during the first wave.

Second-Wave Case Studies

Information collected in the naturalistic study and the first-wave case studies led to the design of the data collection instruments that were fieldtested during the expanded second-wave case studies. These questionnaire/interview protocols, although characterized by carefully structured items with specific response options, also contained provisions for open-endedness that permitted the evaluators to continue eliciting input about the content and format of the data collection

instruments. The instruments were developed around the role groups specified in the design matrix. Fieldtesting of the classroom observational instrument and the Early Childhood Environment Rating Scale (Harms & Clifford, 1980) was completed during the second wave.

Third-Wave Component

The third-wave component of the present study was designed to encompass both a major quantitative data collection effort and a continued qualitative core investigation. This was accomplished by means of two mail surveys, an interagency group interview, on-site observations, on-site interviews, and telephone interviews. Role-specific surveys were sent to 621 persons, class and individual profile instruments were sent to 402 preschool handicapped teachers, representatives from 14 different agencies were interviewed, 27 classes were observed, 193 persons were interviewed on-site, and 25 parents were interviewed either on the site or by telephone.

Subjects

The units of study for the project were the LEA preschool handicapped programs, of which there were 65. The units of observation were the individual preschool handicapped classes, of which there were more than 300 at the beginning of the study. This number grew to 402 by the end of the study because some programs increased the number of preschool handicapped classes for the 1985-86 year.

The program personnel included LEA supervisors/early childhood

coordinators, school administrators, teachers, professional ancillary staff (speech therapists, physical therapists, occupational therapists, adapted physical education teachers, and nurses), paraprofessional and ancillary staff (aides, attendants, and bus drivers), child search coordinators, pupil appraisal personnel (typically social workers, assessment teachers, and psychologists), and volunteers. Related and support service providers also included a variety of external agencies and institutions.

The service recipients included not only the children in the programs, but also their parents, grandparents, foster parents, and other relatives who might have had custody of the children or were an integral part of the family's life. Also affected by the program were the kindergarten teachers who had "graduates" of the preschool handicapped programs placed in their regular kindergarten classes.

In each wave of the study, consideration was given to each of the individual service providers and service recipients. A special interagency segment was designed during the study's third wave to explore in depth the relationship between or among the various related service agencies and institutions and the LEA preschool handicapped programs. This was accomplished via a case study of one program located in an area determined to be rich in external agency resources. One entire day and four staff people were devoted to this segment, which consisted of a group interview of persons representing 14 different agencies or institutions.

In addition to the 65 LEA programs which form the core of the study, the evaluators also collected descriptive information about 15 special education residential facilities and nine programs listed as

Approved Special State Schools. These special sites not only differed in format from the center-based, home-based, and combination formats used in the preschool network, but also the special sites themselves had no commonalities to permit appropriate grouping for analysis. Nevertheless, since the special sites do provide critical services to the three- to five-year-old handicapped population, the special facilities and the services they provide were outlined in the study.

Protocols for the Naturalistic Component

The protocols for the naturalistic study consisted of a series of research-based, open-ended questions used to initiate communication with program staffs. As indicated previously, the input collected from these communications and the data from the on-site observations were later used to construct a design matrix.

Instrumentation to Describe Children

Having noted during the naturalistic study that there was some problem with definitions and labels, the evaluators designed an instrument that would allow more accurate description of children being served in the preschool handicapped programs. For example, it was discovered that children were reported one way for state databases and another for federal databases. It was possible, for example, to see children in one noncategorical setting who might be easily mistaken for regular kindergarten children because their delays were so mild; however, in another setting one might see noncategorical children who were in the second

trimester of *in utero* development. While the children in the first class might be verbal, ambulatory, toilet-trained, sighted, and require exposure to other children for socialization and acquisition of school-appropriate behaviors, the children in the second class, in many cases, might well be nonverbal, nonambulatory, in diapers, blind, deaf, and might well require extensive physical therapy and positioning in a simulated womb, not to progress, but rather to avoid regression. In some cases, a similarly wide range of handicapping conditions could be found within a single class. The fact that typical definitions were not functional made the study of the educational implications of type of class or child more difficult.

Instrumentation to Describe Classrooms

There was also a desire to present a comprehensive picture of the early childhood learning environment. Sketching the classrooms and otherwise describing the kinds of activities that comprised the core of the program proved unsatisfactory; therefore, attention was turned to the *Early Childhood Environment Rating Scale* (Harms & Clifford, 1980). During the early phases of the study, the evaluators scrutinized this scale and a number of others for their applicability to the special preschool handicapped settings; their comprehensiveness in describing the facilities, furnishings, materials and equipment, special provisions, scheduling, provisions for meals, snacks, naps, and toileting, language, motor, socialization, and self-help activities; and their usefulness in analyzing program efficacy. After considerable fieldwork, the evaluators concluded that the *Early Childhood Environment Rating*

Scale was the instrument that best met the needs of the study. The evaluators were trained by one of the scale's authors to use the scale, and they conducted a series of observations to establish interrater reliability prior to use of the scale in the evaluation's third wave. Kendall's coefficient of concordance was used in the analysis to determine the level of interrater reliability. The W statistics from these analyses ranged from a low of .66 to a high of .88.

Charting Interaction Patterns

Patterns of interaction between the teachers or aides and the children were of sufficient interest to warrant the collection of some crude interaction data during this wave. The frequency, type (verbal or tactile), and status (negative, positive, or neutral) of interaction were charted during a five-minute period during circle or fine-motor activity times at each site. This was done because observations during the first two segments of the study had led the evaluators to conclude that some teachers were (perhaps unwittingly) selectively interactive with certain types of children. Race, sex, and handicapping condition at different times appeared to have some bearing on the frequency and kind of interaction between the teachers or aides and the students. During the evaluation's second and third waves, the charting was done to determine the existence of these suspected interaction patterns.

Fieldtesting the Questions

Prior to the initiation of the first-wave case studies, a series of

data collection instruments was developed from the design matrix. The naturalistic study had enabled the evaluators to make the instruments role-specific to avoid duplication of data collection and to target selected information-rich sources of information.

First-Wave Use of the Instruments

During the first-wave case studies, the instruments developed from the design matrix were fieldtested, primarily as interview protocols. This enabled the evaluators to identify interpretive difficulties in the questions and to assess the adequacy of the instruments with regard to appropriate content and general comprehensiveness. Responses were recorded and tabulated to enable the evaluators to move from the open-ended format to a structured format with specific response options on the instruments. As issues and concerns surfaced during the case-study interviews and observations, notes were made about adding specific items to the instruments and the restructuring of item stems and responses. In a few cases, items were moved from one role-specific instrument to another as the evaluators grew more knowledgeable about the different subject groups and the data they could provide.

Prior to the initiation of the second-wave case studies, results of the first-wave fieldtesting were used to revise the instruments substantially. It was necessary, for example, to separate the professional and paraprofessional ancillary staffs and to develop instruments which addressed the concerns and roles of each group. Since some of the instruments were to be completed as paper-and-pencil questionnaires during the second-wave case studies, the evaluators worked to change the

open-ended questions (which were appropriate for interviews) to multiple response items. The information collected in the field was used to structure the questions and to list possible response items.

Second-Wave Use of the Instruments

In second-wave use, the evaluators conducted interviews with the program staff to elicit reaction to the instruments, in terms of appropriateness of items, ease of interpretation, time required to complete the instruments, and general comprehensiveness of the instruments. The evaluators pursued the qualitative element in the second-wave case studies by targeting the persons they believed were information-rich sources and by interviewing these individuals. These interviews continued to assist the evaluators in issue identification. The naturalistic flavor of the first-wave study permeated this wave also, and while enabling the evaluators to continue learning about the program being evaluated, it prevented them from becoming "locked in" conceptually in terms of the components of the study. They pursued, for example, stress-related factors identified by program staffs, such as repeated assignment to severe/profound classes, inordinate amounts of paperwork, maintenance-of-health procedures, lack of opportunity for professional growth, lack of provisions for professional sharing and support, and emotional involvement with the children and their families. While the issue of stress was raised during the naturalistic study, some factors perceived by program personnel as being associated with stress were not identified until the final third-wave component. The evaluators also explored the implications of maintenance-of-health procedures,

such as intermittent catheterization, tube feeding, and suctioning in interviews with supervisors, administrators, teachers, aides, and parents. This issue did not surface until the interim between the second and third waves. Thus, the value of maintaining openness to new issues was actually realized during the evaluation.

Following completion of the second wave, the evaluators conferred with an advisory team representing LEA and state program managers in the field of early childhood special education for the purpose of ascertaining if the proposed evaluation components would meet the needs of program personnel. This general conference was preceded by a series of debriefing sessions, the purpose of which had been to keep program personnel's fingers on the pulse of the evaluation. At these sessions, evaluators discussed preliminary findings and gave program personnel an opportunity to react to findings and offer suggestions as to the general direction of the evaluation.

Third-Wave Use of Instruments:
Continued Qualitative/Quantitative Integration

The evaluators structured the final third-wave component to facilitate a continued interweave of the quantitative and qualitative elements of the study. Some open-endedness and some options for supplying additional information related to the program were included on the final draft of the instruments. Surprisingly enough, a substantial number of program personnel took advantage of these options or the open-ended items and supplied some "thick descriptive" information. In addition to these instruments, which yielded primarily quantitative

data, a core of open-ended questions was developed to permit the continuance of the qualitative evaluation component. These questions addressed issues and concerns that evolved during and after the second-wave case studies and subsequently could not be investigated via the instrumentation. The qualitative item core was designed to be used as a series of interview protocols. Via this procedure, the evaluators were able to investigate specific areas that otherwise would have been relegated to the space reserved in the technical report for "recommendations for further study." This was particularly pleasing to the program clients and the funding sources who saw that they were getting more for their dollars invested in the study and to the evaluators who were able to use selected quantitative data to substantiate or negate the qualitative data, thus giving an added dimension to the study. Figure 2 presents examples of this integration of both open-ended and fixed-response items.

Procedures/Design

First Wave

Four programs were randomly selected on the basis of program format for inclusion in the evaluation's first wave. One center-based program, one home-based program, one combination program, and one residential program were selected. The two evaluators scheduled site visits ranging in length from one day to three days to each of the programs, with the size of the program being the determining factor in the length of the site visit. No sampling was done within the program. One hundred

24A. *What difficulties have you observed in the preschool handicapped program? (Check all the difficulties you have observed.)*

128 129

01 ___ There are difficulties in securing and keeping an adequate number of teachers and other program staff.
02 ___ There are difficulties in finding qualified or trained staff.
03 ___ Funding is not adequate.
I read of one county that screens all 3yr. olds. Great idea! ← 04 ✓ There are difficulties in finding children who are potential qualifiers for the program.
05 ___ There are difficulties in assessing children referred for services.
06 ___ Teachers have difficulty in transporting materials to home-based settings.
07 ___ Medical evaluations frequently delay the assessment process.
08 ___ Medical evaluations are difficult to interpret.
09 ✓ Parents are less involved than they should be.
10 ___ There are inadequate curricular materials available for use with low-functioning children.
11 ___ Materials/supplies are inadequate.
12 ___ The method of transporting students is unsatisfactory.
13 ___ Students spend too much time traveling to and from class.
14 ___ Program staff experience burnout.
15 ✓ Available physical facilities are not adequate for these children.
16 ___ The physical facilities are not located in a setting that permits integration of the preschool handicapped children and regular children.
17 ✓ Ancillary staff (therapists, (adapted physical education teacher, nurse) do not have appropriate working space.
18 ✓ There should be more or better coordination between related agencies (health unit, etc.) and program personnel.
19 ___ There should be more or better coordination among the personnel who provide different services within the program (teacher, therapists, adapted physical education teacher, assessment team members).
20 ? It is difficult to secure special services like physical therapy, occupational therapy, etc.
21 ___ There are problems in integrating the exceptional children and the regular children.
22 ___ The quality of instructional services provided during the extended-year (summer) program is not on par with that provided during the regular year.
23 ___ There are difficulties documenting regression in order to determine children's eligibility for the extended-year program.
24 ✓ The extended-year program denies some staff and children the opportunity for a needed break.
25 ___ There are difficulties in interpretation of/compliance with 1508 guidelines. Please indicate the specific area in which these occur:

_____

26 ___ Other _____

14

24B. *Write the number of the difficulty among those on the preceding page that causes you MOST CONCERN.*

166 67

01 04

****

Being cognizant of your heavy workload and hectic schedule, our staff would like to extend our special thanks to you for participating in this study. We cannot overemphasize the contribution you have made by supplying information about your program.

If there are unique areas, strengths, or weaknesses of your program that have not been addressed in this questionnaire, please comment in the space provided below. Also, please feel free to comment on any item on the questionnaire.

Let us once again encourage you to take advantage of this opportunity to share suggestions or concerns about the preschool handicapped program. Confidentiality is assured. Your time in providing this additional, valuable information is appreciated.

Strengths: I am enjoying the RAPHY T pilot program designed to work with the cognitive strengths of the children rather than focusing on their handicaps. I have always ~~used~~ based my program on ~~them~~ stimulating children to notice and take part in as many experiences as possible. The slower children seem to be trying harder with the brighter children as models. Suggestions for improvements:

I really like the idea of screening all 3 year olds in the pawhon state. It might seem expensive, but I believe it would be cost effective in the long run in educating these children who need extra stimulation. I believe in hands-on, whole ~~unique areas~~ brain and body activities and don't feel that dittos teach children. I use them sparingly (perhaps one a day) to reinforce certain academic skills or concept development.

Once again, we would like to thank you for your assistance in this project.

I think there should be an organized program to involve all parents. Some parents show up once in 15 years for the mandatory IEP conference and that's it.

Figure 2. Illustration of Quantitative and Qualitative Responses on the Questionnaire for Teachers.

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percent of the teachers were observed in their teaching environments, staff members representing 12 different service roles were interviewed, and at least one parent from each program was interviewed. The parent representatives were not randomly selected, but were nominated by the classroom teachers who knew which parents were capable of communicating and which would be willing to participate in an interview. The teacher selection of the parents did not appear to introduce any particular bias in the overall study, although in some programs, it seemed as though the teachers and the parents were comrades in arms against the "system." Parents, although generous in their praise for the preschool handicapped program, were not reluctant to make recommendations for improvements. Given this selection factor, however, one should be cautious about generalizing these results to other parents.

Second Wave

Stratified randomization was used to select eight programs for inclusion in the second-wave case studies. Representatives from each of the identified service-provider roles were interviewed at each site. A 20 percent sample of the preschool handicapped classes in each program was observed, a process that required a minimum of three hours per class. Teachers were asked to recommend parents who would consent to be interviewed by the evaluators. These interviews were generally done by telephone, although in a few cases, the parents were on-site and were personally interviewed there.

A major difference between the evaluation's first and second waves was the use of some of the instruments as questionnaire protocols rather

than interview protocols. This wave was also the first time the evaluators worked separately, with one completing the environment scale and the other distributing questionnaires and interviewing staff.

Third Wave

The final third-wave component was the most intricate and the one in which the qualitative and quantitative evaluation components were thoroughly integrated. A series of 27 site visits was conducted, with half being completed in the fall and half in the spring in an effort to control for maturational and historical interaction. Each site visit required a team of two persons working a minimum of four hours to complete. The site visits consisted of extensive observation of the handicapped children in the classrooms, cafeterias, restrooms, loading areas, play areas, and therapy areas, as well as interviews with the teachers, administrators, professional and paraprofessional ancillary staff, and parents.

Midway between the fall and spring site visits, a major data collection effort was launched via a mail survey of 621 persons, which yielded a 77 percent return rate. Stratified randomization was used, and no persons included in the on-site interviews were included in the mail survey. The role-specific instruments alluded to earlier were used in this survey.

Interagency Case Study

Following completion of all site visits, an interagency case study

was planned. The case study, completed in a group interview format, required four staff people and six hours of contact time with representatives of 14 different agencies/institutions. The content and planning related to the case study evolved over an eight-month period.

A qualitative core was also developed for the interagency case study. The content of this core evolved from the perceptions of the evaluators of the presence or absence of interrelationships among various agencies and institutions and the preschool handicapped program personnel. These perceptions evolved throughout all four segments of the study, since the evaluators made no attempt to finalize the content until after all fieldwork had been completed. This maximized the coverage of issues and concerns explored during the interagency group interview.

Final Third-Wave Segment

The final segment of the third wave involved the collection of descriptive class block data and individual student outcome data. The 402 teachers working in the preschool handicapped program were requested to provide demographic data on their classes and demographic and pretest/posttest data on two specific students in their classes. To facilitate reporting these data, the evaluators developed a Class and Individual Profile data collection instrument. The instrument was sent directly to 402 teachers, all of whom had received information about the study via newsletters and a special personal letter from the evaluators. Program supervisors, with whom the evaluators had met periodically, also spoke to the teachers about the study.

Results

The qualitative and quantitative data collected thus far in the study are currently undergoing analysis. One major component of outcome data, the class and individual profile data, will not be available until late spring of the current year. Preliminary findings will be compiled into a series of reports which will be reviewed by the federal and state program personnel prior to dissemination. There are, however, some major implications for evaluation practice that can be shared at this time.

Client Participation Increases Evaluation Use

The study was designed in a way that permitted the evaluators to investigate, explore, and learn about the preschool handicapped programs throughout all phases of the study. This was accomplished via carefully planned communication with program personnel at all levels, as well as with parents and kindergarten teachers. Maintenance of this openness throughout the study not only enhanced the quality of the evaluation content, but it also resulted in a positive, receptive attitude on the part of the study's participants and the target audience. These persons came to perceive the evaluation and the planned dissemination products as tools with which they could improve their programs.

The likelihood of their eventually using the evaluation's results was maximized by using input related to issue identification and other concerns, and by incorporating these concerns and issues in the data collection instruments. The evaluators were repeatedly told that when

people in the field cooperate with a study, they rarely understand the purpose of the study, seldom get feedback from those persons conducting the study, are rarely told of the value of their participation, and infrequently derive any benefit from the study or ever hear the results.

In light of comments like these, plans were made to write a series of nontechnical, role-specific papers that would be distributed to all the programs in addition to the usual executive summary. Even parents requested feedback in this form.

Value of a Self-Informing Design

The use of evaluation designs in the quantitative tradition may preclude consciousness of unanticipated relationships or program effects. As Rist (1975, p. 92) notes

> The presence of preconceived ideas held by the investigator may distort the findings and interpretations to such a degree that they no longer reflect the original observed behavior.

Similarly, McCutcheon (1981, p. 9) has observed that "we can only see, only count, only code those items admitted to perception by the instrument."

In the present study, the design was made "self-informing" by the use of qualitative methods prior to the development of the protocols used in the quantitative wave of the study.

The value of the design cannot be overstated in how it facilitated issue identification. For example, the design made possible the identification and inclusion of items related to the maintenance-of-health implications; kindergarten teachers' attitudes toward the presence of

preschool handicapped "graduates" in their classes; efficacy of current child-search practices; cost implications in pupil appraisal; home-based versus center-based teacher competencies; staff burnout; agency and school "sharing" of children; level of acceptance of handicapped preschoolers; and developmental curricula versus academic curricula.

The questioning strategies employed during the qualitative interviews with personnel and others resulted, in a number of cases, in their realization that they had tremendous potential at hand for longitudinal studies and for completing a wide array of local-level reporting and bookkeeping chores. Some program people began to realize that something with which they had to comply could actually serve them.

Summary

The qualitative and quantitative research paradigms are inherently contradictory in their philosophical assumptions, their methods, and their purposes (Smith & Heshusius, 1986; Thompson, 1986). However, the methods of both paradigms can be usefully employed in a given evaluation study. When a qualitative study is conducted initially, the external validity of the quantitative study is enhanced. Evaluators can be more confident that the correct questions are being posed. And the process may also facilitate greater use of evaluation results.

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